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Amendment and Response to Restriction Requirement

Amendment to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A composition for interacting with a ligand, which composition comprises a non-covalent association of a plurality of distinct conjugates, each conjugate comprising a head group and a tail group, wherein in tail groups of the conjugates form a hydrophobic aggregation and the conjugates are movable within the association so that, in the presence of a ligand, at least two of the head groups are appropriately positioned to form an epitope capable of interacting with the ligand more strongly than each of head groups individually.
2. (Original) A composition according to claim 1, wherein each conjugate has a head group selected from: an amino acid or peptide; a peptide analogue; a mono- or poly-saccharide; a mono- or poly-nucleotide; a sterol, a water-soluble vitamin; a porphyrin or haem nucleus; a metal ion chelate; a water-soluble drug; a hormone; and an enzyme substrate.
3. (Original) A composition according to claim 2, wherein each head group comprises an amino acid.
4. (Original) A composition according to claim 3, wherein each head group comprises a peptide comprising the amino acid.

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5. (Previously presented) A composition according to claim 3, wherein the head groups which form the epitope comprise terminal amino acids selected from at least two of the following:

hydrophobic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids, and aromatic amino acids.

6. (Previously presented) A composition according to claim 1, wherein each tail group is the same or different and comprises a lipophilic group selected from a straight or branched-chain fatty acid, alcohol or aldehyde having at least 8 carbon atoms; a lipidic amino acid analogue; a prostaglandin; a leukotriene; a mono- or di-glyceride; a sterol; a sphingosine or ceramide derivative; and a silicon or halogen-substituted derivative of such lipophilic group.

7. (Original) A composition according to claim 6, wherein each lipophilic group comprises a C₁₀ to C₁₄ fatty acid.

8. (Previously presented) A composition according to claim 1, wherein each conjugate further comprises a spacer group linking the head group to the tail group.

9. (Original) A composition according to claim 8, wherein the spacer group is hydrophilic.

10. (Previously presented) A composition according to claim 8, wherein the spacer group comprises an amino acid, a hydroxy acid, a sugar or a polyethylene glycol.

11. (Previously presented) A composition according to claim 1, wherein the non-covalent association comprises a lamellar structure, a micelle or a liposome.

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12. (Previously presented) A composition according to claim 1, for use as a medicament, a prophylactic or a diagnostic.

13. (Currently amended) ~~Use of a conjugate comprising a head group and a tail group, for A method of treating a disease with the preparation of a composition according to any one of the preceding claims of claim 1 comprising the step of administering the composition into a patient.~~

14. (Currently amended) ~~Use according to The method of~~ claim 13, wherein the head group of the composition is selected from a group consisting of an amino acid or peptide, a peptide analogue; a mono- or poly-saccharide; a mono- or polynucleotide; a sterol, a water-soluble vitamin; a porphyrin or haem nucleus; a metal ion chelate; a water-soluble drug; a hormone; and an enzyme substrate.

15. (Currently amended) ~~Use according to The method of~~ claim 14, wherein the head group comprises an amino acid.

16. (Currently amended) ~~Use according to The method of~~ claim 15, wherein the head group comprises a peptide comprising the amino acid.

17. (Currently amended) ~~Use according to The method of~~ claim 15, wherein the amino acid comprises a terminal amino acid selected from hydrophilic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids, and aromatic amino acids.

18. (Currently amended) ~~Use according to The method of~~ claim 13, wherein the tail group comprises a lipophilic group selected from a straight or branched-chain fatty acid, alcohol or aldehyde having at least 8 carbon atoms; a lipidic amino acid analogue; a prostaglandin; a leukotriene; a mono- or di-glyceride; a sterol; a sphingosine or

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ceramide derivative; and a silicon or halogen-substituted derivative of such a lipophilic group.

19. (Currently amended) ~~Use according to~~ The method of claim 18, wherein the lipophilic group comprises a C₁₀ to C₁₄ fatty acid.

20. (Currently amended) ~~Use according to~~ The method of claim 13, wherein the conjugate further comprises a spacer group linking the head group to the tail group.

21. (Currently amended) ~~Use according to~~ The method of claim 20, wherein the spacer group is hydrophilic.

22. (Currently amended) ~~Use according to~~ The method of claim 21, wherein the spacer group comprises an amino acid, a hydroxy acid, a sugar or a polyethylene glycol.

23. (Original) A method for producing a composition for interacting with a ligand, which method comprises:

- (a) providing a plurality of distinct conjugates, each conjugate comprising a head group and a tail group; and
- (b) forming from the plurality of conjugates a non-convalent association thereof, in which the tail groups aggregate hydrophobically and in which the conjugates are movable so that, in the presence of a ligand, at least two of the head groups are appropriately positioned to form an epitope capable of interacting with the ligand more strongly than each of head groups individually.

24. (Previously presented) A method according to claim 23, wherein each conjugate is as defined in claim 13.

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25. (Previously presented) A method according to claim 23, wherein the non-covalent association comprises a lamellar structure, a micelle or a liposome.

26. (Previously presented) A method according to claim 23, wherein the step of providing the plurality of conjugates comprises

- (I) selecting a set of conjugates with an array of head groups;
- (ii) forming a non-convalent association therefrom, in which the tail groups aggregate hydrophobically and in which the conjugates are movable;
- (iii) assaying for sufficient interaction between the non-covalent association and the ligand;
- (iv) optionally repeating steps (I) to (iii) using a set of conjugates with a modified array of head groups; and
- (v) on finding sufficient interaction in step (iii) selecting the set of conjugates as the plurality of conjugates in step (a).

27. (Original) A method according to claim 26, wherein the array of head groups comprises (I) at least one terminal amino acid from each of the following classes of amino acid:

hydrophobic amino acids, hydroxylic amino acids, acidic amino acids and amide amino acids; and (ii) at least two further terminal amino acids comprising at least one basic amino acid and at least one aromatic amino acid, or at least two basic amino acids or aromatic amino acids.

28. (Original) A method according to claim 27, wherein the modified array of head groups used in step (iv) comprises the array of head groups used in steps (I) to (iii) in which the at least two further terminal amino acids are different from those used in steps (I) to (iii).

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29. (Original) A method according to claim 26, wherein the array of head groups comprises (I) at least one terminal amino acid from each of the following classes of amino acid;

hydrophobic amino acids, hydroxylic amino acids, acidic amino acids, amide amino acids, basic amino acids and aromatic amino acids.

30. (Original) A method according to claim 29, wherein the modified array of head groups used in step (iv) comprises the array of head groups used in steps (I) to (iii) in which the at least one terminal amino acid from one of the classes of amino acid is either absent or replaced by a charged version thereof.

31. (Previously Presented) A method for producing a molecule for interacting with a ligand, comprising:

- (1) producing a composition according to the method of claim 23;
- (2) identifying the at least two head groups which form an epitope for the ligand in the composition; and
- (3) producing a molecule incorporating the functional groups of the at least two head groups optionally spaced apart by one or more linker groups so that the molecule is capable of interacting with the ligand more strongly than each of the head groups individually.